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Press Advisory

Dedication Ceremony for New EPA Supercomputer

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Research Triangle Park, NC.....(August 30, 1999) The media is invited to a ribbon-cutting ceremony to dedicate the U.S. Environmental Protection Agency's new supercomputer at 3 p.m. on Sept. 2 at the Environmental Research Center, 86 T. W. Alexander Drive, in Research Triangle Park, NC. Please contact the Public Affairs Office at 919-541-7818 to attend.

The ceremony will be attended by EPA officials, U.S. Rep. David Price and guests. Following the ribbon-cutting, a demonstration will be conducted in the Scientific Visualization Center, where supercomputing output is transformed into three-dimensional graphics and animation segments used by EPA, as well as its state and industrial partners.

The $3.6 million supercomputer will support environmental research by EPA scientists nationwide, including those in Research Triangle Park where the Agency's largest research facilities are located. The supercomputer and two older supercomputers are part of the EPA's National Computing Center, the only one of its kind with supercomputers dedicated exclusively to environmental research. The supercomputers eventually will be moved to a new 52,000-square-foot computing center under construction at the EPA's new research campus in RTP.

The Cray T3E supercomputer will be used to develop the next generation of environmental management tools for federal and state regulators to use in making decisions to control and prevent pollution. With 16 gigabytes of memory and the ability to perform 64 billion computations per

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second, the state-of-the-art supercomputer will be used to address today's complex environmental problems.

A primary use of the new supercomputer will be to develop more advanced models that track a pollutant's entire path from its source as it travels through the air, water and land to its final destination. EPA has developed an air pollution model, called Models-3/CMAQ, that simulates the transport of many chemicals in the atmosphere across large geographic regions. The new supercomputer will be used extensively to run "what if" scenarios of pollution control efforts and expand air modeling capabilities to determine the most cost efficient and effective control measures to meet federal air quality standards.

Other applications of the supercomputer include:

- Creating air-watershed-estuary models to simulate how air and watershed pollutants impact an ecosystem such as the Chesapeake Bay.
- Developing methods to study the deposition of air pollutants in human lungs, especially in sensitive subpopulations such as children and the elderly.
- Studying the flow of air pollution around and within buildings to determine how humans are exposed.

"Supercomputers and computational tools have become as important to environmental research as laboratory experiments and work in the field," said Dr. Norine Noonan, Assistant Administrator of EPA's Office of Research and Development in Washington, D.C. "Like microscopes and telescopes before them, supercomputers open whole new worlds for scientific exploration -- in this case "virtual worlds" running electronically. The new supercomputer is an outstanding addition to EPA's research and environmental management capabilities and we are excited about the scientific opportunities it offers," she said.